University Botanic Garden

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THE UNIVERSITY BOTANIC GARDEN

A Short History of the Garden

prepared for

The Ladies' Auxiliary Committee

of the

BOTANICAL SOCIETY OF PENNSYLVANIA

by

J. M. MACFARLANE

PROFESSOR OF BOTANY DIRECTOR OF THE GARDEN

PHILADELPHIA

1899

VIEW OF THE LILY POND.

THE UNIVERSITY BOTANIC GARDEN

SOME members of the Botanical Society of Pennsylvania, and various of their friends, have asked the writer for a sketch of the origin and growth of the University Garden. The following is a brief epitome of its history, and it is hoped that the presentation of this will induce many loyal Philadelphians to take a deeper interest in its welfare than hitherto.

When the writer was appointed Professor of Botany in 1893, he at once indicated the special advantages to be gained by reclaiming the waste ground round the Biological Department and occupying it as a Botanic Garden. He prepared and submitted plans for the development of the area round and behind the Biological School, extending to nearly five acres. No forward movement was made at that time, but soon after the accession to office of Provost Harrison the proposal was brought to his attention. He entered heartily into the scheme, and by financial aid as well as advice he has enabled the garden to become what it now is. When the writer took charge in the autumn of 1894, there was given over to him a sodded area about one acre in extent on either side of the Biological Department, while behind this stretched waste hills and hollows of sand and gravel, with soil heaped at intervals. The conversion

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of the entire area into the present garden was begun under such conditions.

Two plant houses were constructed, an extensive system of 68 long plant beds for herbaceous specimens belonging to the different plant orders was laid out, and by generous donations from American and European gardens an assemblage of about 1500 species was brought together during the succeeding summer. Two ponds for aquatic plants, an extensive system of rock gardens, a bog garden, an Iris garden, and other features of interest were gradually added.

The succeeding year saw the development of various natural groupings of plants that are characteristic of some of our plant regions, and also of a small arboretum in which are now cultivated between 300 and 400 species and varieties of shrubs and trees.

Through the generosity of Provost Harrison important additions were made to the plant houses at the close of the season of '97. These houses now represent more than 9000 feet of glass surface, and consist of eight houses in addition to propagating frames. One of the greenhouses, immediately connected with the laboratory for plant physiology, is in part utilized as a temperate house, in part for the work of students in plant physiology. An adjoining house, 34 × 11 feet, is arranged as a fernery, and contains a representative collection of ferns and their allies.

Opening from the last are a propagating house, 40 × 10 feet, a stove house, 46 × 18 feet, and a palm house,

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VIEW IN THE PALM HOUSE.

59 × 28 feet. The two last now contain a varied collection of Pitcher plants, Aroids, Melastomids, Sensitive plants, Palms, Marantas, Bananas, Bamboos, etc. To the right of the palm house is a succulent house containing a type collection of Cacti, Euphorbias, Gasterias, Aloes, Agaves, Crassulas and other forms that are more or less similarly modified to live in arid regions and successfully resist long periods of drought. Here have recently been germinated seeds of the curious Opuntias and the night-blooming Cereus, the Fig-marigolds and Rhipsalids, which from their seedling state onward differ markedly from other plants.

On the left side of the palm house are two structures each 59 × 13 feet. The inner of the two now contains a fair collection of sub-tropical and tropical orchids donated by Mr. Le Boutillier, and more recently by Mrs. George Wilson. Sharing the house with these are parent species and hybrid derivatives of the popular Begonias and Gloxinias, as well as specimens of the curious South African genus Streptocarpus, two species of which show only one of the two seed leaves, though this may attain a length—as in one specimen exhibited at our meetings—of two to three feet. Species of Oxalis and Solanum, the curious simple-leaved Chorizema from Australia, and many other sub-tropical types of great value in undergraduate and graduate teaching find a home here.

The outer or cool house lodges many plants of great botanical interest, chief among these being the celebrated

A GROUP OF SARRACENIAS BY THE POND.

Venus Flytrap, several native Sundews, groups of our Southern Trumpets or Sarracenias, and the Butterworts, all celebrated as fly catchers.

Quite recently two important features have been added to the outside garden in the shape of a hardy fernery, in which all of our native and not a few exotic species will be set out. Near to this is a Bryarium which, by shading with trees, gentle percolation by water, and appropriate soil, is suited for the growth of 60 to 70 species of Moss and Hepatic.

The two lily ponds contain the pink and yellow Lotus, the true Water Lilies, Cat-tails, Golden Clubs and other well-known aquatics, as well as a rich variety of the fresh water Algæ.

It has been a constant aim to make the garden not a show place, but rather a scientific centre for living plants, where the greatest variety of forms, from the humblest to the most highly organized, can be brought together and cultivated under conditions most nearly like those enjoyed by plants in their native haunts.

For the successful prosecution of botanical study and research, living plants must be constantly grown, watched, experimented with and compared. A large amount of our work is done during winter, and thus the requirement for ample greenhouse facilities is fully justified. These we regard as our laboratories for living plants, and in them the student must spend hours in practical observation that constitute an invaluable training. Then, year

by year, as spring advances into summer, the student obtains a wider acquaintance with plant life, for upwards of 2000 species and varieties gradually come into bloom in the beds, so that opportunities for a wide study and comparison of plant forms is made possible.

It may here be noted that first among the universities of this country, the University of Pennsylvania has insisted that its graduates in the Department of Philosophy shall have spent practically a continuous year watching living plants in their seasonal activities in some botanic garden such as that now described. But it can be claimed for the botanic garden that though still young, its usefulness has not been confined to demonstrational education. Several valuable original publications have been made possible by the facilities it offers, and these have had a wide circulation as "Contributions from the Botanical Laboratory of the University of Pennsylvania."

Objection has been made to some of our members that the area of the garden—nearly five acres—is too small for the requirements of the case, but this is a mistaken view. Its compact size and its accessibility to our Botanical Department constitute its most powerful recommendations. The greenhouses are all continuous with the laboratories, class rooms and library of the department. The plant beds immediately surround the greenhouses and are amply stocked with specimens for university teaching. Any object desired for demonstration can be obtained within a few minutes, and every part

of the garden is free for inspection by our students and the general public. It has been the universal experience, on the continent of Europe, that small compact botanical gardens, when well stocked and scientifically developed, give finer results than large and imposing institutions which are mainly show establishments for the instruction of the general mass of the people. Thus the gardens at Munich, Bonn, Strasburg and Wurzburg have had a world-wide reputation on account of the high scientific work done in each, though the gardens themselves are small. The existence of the smaller University garden should not preclude the development of a larger institution that would be worthy of this great City and State, but any attempted absorption of the one into the other would be an undoubted misfortune, and would hinder rather than advance high scientific work.

The growing beauty of the University Garden as a part of the Campus is being more and more recognized. It should be the aim, therefore, of all who are truly interested in the growth of the University to conserve and to enrich to the utmost our Botanic Garden. No similar institution of learning in the country can show such a botanical equipment in direct communication with the centre of instruction as our own. For such reasons it should claim the interest and support of every loyal Pennsylvanian, and of every Philadelphian who desires to see a truly great institution of learning centered in this city.

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